ANT/SHE/06

ATCH

1971-1

0045

BAY AREA

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Page	Subject

AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION
LIBRARY
19 JAN 1998

9 Dec Nella to Icebergs, and return
15 mins

11 Dec Nella Run to Davis
5 mins

14 Dec Flight over S. Vestfold Hill
40 mins.

Note All bearings are true

Samples 81285100 –

	Pick-up	drop
Davis	0915	0940
Rowes I s	1115	1125
	1220	1230
	1450	1500
	1610	1620
	1715	1725
	1820	1840

Tues 16 Dec 1980 0930 – 0955

RAUER ISLANDS

① S.W. Filla Island 75/R320/7065L

Metamorphosed dyke – sl discordant locally, but quite biotite-rich, and with pegmatitic veins and segregations

Strike 290° (true)

Country rocks – rather migmatitic, strongly layered and deformed.

Some pink X-cutting biotite pegmatites

Much v massive granitic gneiss (sl foliated), with rare garnet

Layered sl more melanocratic gneiss – biotite + ? pyroxene (brown, charnockitic appearance.

Dip 020° ~ 85°

5100 meta dolerite

5101 thinner metadolerite

5102 'Charnockitic' gneiss

5103 Charnockitic gneiss

5104 massive garnet granitic gneiss

5105 massive garnet granite gneiss

(2) W end of Island N of Fella Is
75 R320/7067L

5106 metadolerite
5107 metadolerite
5108 gt-rich gneiss
5109 Biotite gneiss

V. st banded gneiss
Some prob. metadolerite dykes, but
little evidence of discordant contact
V. st folded, but general ~~strike~~
dip 070/75.

Much deformed pegmatite - st Cleated
(Qtz rods etc). Garnet-rich gneiss
and biotite gneiss — many minor
folds - in mafic layers.
Some rusty-weathering layers.
Some pods of mafic granulite
wit large feldspar Xls.

(3) Island SE of Fella Island
75 R320/8066V
St deformed ~~gl~~ biotite gneiss
Dip 170/80

Many mafic layers, pods probably
representing metadykes.
Many minor folds and small

mafic schlieren. Mod. pegmatitic material, some gt-bi rich selvedges. Pegmatitic segregations and veins also present in mafic granulites. Mostly gt-bi-qtz feld greiss with pegmatitic segregations (discontinuous, few X-cutting veins)

5110-2 gt-bi-qtz-feld greiss
5113 ?metadolerite.

(4) S most outprop on coast of Rauer Gp
75R320/906318

Massif of brown-weathering charnockite with thin mafic granulite dykes, little deformed, except locally, but some biondrosi. X cut by thin qtz-feld pegmatite veins
5114-5 massive charnockite
5116 mafic granulite dyke

(5) L. Shepherd Island — SE Rauer Gp

75R320/9063R

V str migmatitic gneisses — almost agmatitic. Mafic rocks and lenses v. common — fairly even-grained granulites — some garnets locally. Felsic component — str layered and foliated. Many minor folds.

X cutting biotite pegmatites; also str deformed qtz-fsp pegmatites, strongly lineated.

Some gr-rich qtz-fsp (± bands) gneisses and charnockitic gneiss

5117 Str-bearing mafic
5118 Rich str qtz fsp gneiss
5119 Massive felsic gneiss

(6) Coastal outcrop about ½ down Rauer Gp. 75R320/9065R

Massive felsic gneiss, with some mafic granulite layers (pre m/m dykes).

Rep 070/85

(Russian "granite" outcrop)

5120-1 massive charnockitic felsic gneiss

17 Dec 1980 RAUER ISLANDS

(7) SW end of Hop Island 75 R320/ 7061L

Banded gt-rich gneisses and some more massive charnockitic gneiss

Dip 045/85

To E, rocks look rather more massive than on SW tip Some layers are probably of intrusive (charnockitic) origin Some light grey coloured felsic gneiss with minor gt & / or kyanite. Not much mafic material in evidence

5122 Gt Biot gneiss

5123 Gt biot gneiss / fine grained

5124 Even grained charnockitic gneiss

5125 Coarser charnockitic gneiss

(8) Island E of Hop Is.

75R32a/70636

Dep 190/75

Quite st layered and deformed gneisses much v massive felsic gneiss - pink represents deformed Regnahilic - some areas are still preserved (unfoliated) with large knobbles. No obvious dolerite dykes, but much mafic material in pods and discontinuous layers - locally garnet rich

massive chamockitic gneiss (wk basic and some semipelitic) has inclusions of mafic granulite

Some v st banded gt rich but qtz felsic gneiss

5126 gt bearing mafic granulite
5127 massive chamockitic basic gneiss
5128 massive gt. basic gneiss
5129 massive gt-bearing gneiss

(9) Island S of Hop Is (S end)

75R32a/70616

Mostly v massive basic ± gt gneiss (chamockitic appearance) - some v quite coarse-grained

Dep 190/80

Some more of layered rocks, including gt + kyan rich gneiss. Some mafic granulite may represent m/m dykes. Much of this island is rather massive granite, but no granite dykes.

5130 Massive charnockitic granite gneiss
5131 " " " "
5132 Fine grained gneiss with garnet + kyan (more or less banded)

(10) Torckler Is — 300m W of cairn 75 R320/8060V

mostly charnockitic granite (some garnet) with numerous inclusions and schlieren of mafic granulite, garnet pegmatite etc. Some areas of st. folded layered gneiss — gt-rich, rusty weathering etc etc. Schlieren in granite are also folded, boudinaged. Some pegmatite segregations.

5133 Massive charnockite
5134 massive gt. charnockite
5135 grey gt-biot gneiss
5136 mafic granulite

(11) L-shaped Island, SE of Help Is
75R320/8064V

Rdp 060/85

Rather massive, hard banded garnet-rich granulite.

Rather migmatitic-looking granulite. Veins a few cms thick folded and commonly discontinuous. Some layers (~20 cm) X-cutting leucotic pegmatites. Some layers of very garnet-rich gneiss with coarse-grained segregations (felsic) with a green mineral

5137 garnet-bearing gneiss
5138 garnet-bearing gneiss
5139 garnet-rich gneiss

(12) Small Island NE end of Rauer Gp
75R320/8068V

Rdp 020/90

Mostly massive charnockitic granulite. Many folded hard discordant dykes (equivalent to Vestfold dolerites). Most are foliated and look thoroughly metamorphosed. There are several orientations of dykes (but most are subparallel to gneissosity). Pink leucotic pegmatites cut gneiss and dykes. Many light to medium shades of gold

5140-2 metamorphosed dykes
5143 massive felsic gneiss
5144 massive felsic gneiss

Thurs 18 Dec Amanda Glacier area

① SW Braattstrand bluffs 91R3B/8116V
Dip 160/40

Banded garnet / biotite gneiss
some massive light grey garnet gneiss, some more ~~st~~ layered, more mafic rich. Pegmatite segregations etc (~~so~~ deformed) are quite common
Many minor to mesoscopic tight to isoclinal folds.

5145 Lobate garnet gneiss
5146 Rusty - weathering gt gneiss

② Horde Island 91R3B/8113V

Dip 160/85

V. massive felsic gneiss - cattle tracks

material, except small 10 cm pods and ~~lenses~~ schlieren in massive felsic greens

Some more layered greens contain abundant garnet, but massive greens are also commonly garnetiferous

Quartz veins intrude along minor shear folds

Minor (1-5 cm) pegmatites cut massive garnet greens or are deformed and commonly folded

5147 Garnet greens
5148 Garnet greens
5149 massive felsic greens

(3) E Side of Amanda Rookery - N outcrop
91RBB/8112V

Strike ~ 040

Porphyroblastic granite

Mostly pink feldspar porphyroblasts in biotite rich groundmass

Some grey granite (white porphyroblasts) contains garnet, in addition to

biotite.

Some pegmatite and inclusions of more mafic gneiss, gt-bi gneiss etc

Porphyroblasts and inclusions have a distinct preferred orientation

5150, 1 Pink porphyroblastic bt granite

5152 White porphyroblastic gt-biotite granite

④ Cowell Is (N) 91R3B/8110V

V. ds sheared garnet gneiss (layered)
Much complex folding
Range from v. felsic to gt+biot-rich gneisses

5153 Massive, leucocratic garnet gneiss

(5) Cowell Ex (1) 913R/8110W (Rim)

Rather massive, but layered garnet gneiss, similar to last outcrop, but less strongly deformed.
Quite leucocratic, but some more mafic (gt-bi-rich) layers
Dip 225/85
Many mesoscopic X-cutting shears, & shear-folds.
Not much mafic granulite in evidence

5154-5 Massive, leucocratic gt-bi gneiss

(6) Chaos Gl. Outcrop 75K32/9059K

Migmatitic garnet gneiss with much garnet granite. Restite is more mafic garnet-rich gneiss. Much folded, no consistent strike
Pods and lenses of darker, krommed gt-bi gneiss in white garnet leucogneiss (rarely foliated)
little mafic granulite evident.

5156 — Garnet leucogneiss
5158 Restite garnet gneiss
5159 Garnet quartzite

Fri 19 Dec

Vestfold Hills

(1) S side of Long Fjord – opposite Tryne Fjord (Run 11/9)

· Massive charnockite and foliated gneiss

Many dolerite – mostly NS trending

5160-2 Mafic dykes (NS trending)

5163 Coarse grained charnockite

5164 Even, finer-grained charnockite

(2) ~1 km N of Ace Lake (13/2)

Massive charnockite gneiss

Inclusions and schlieren of mafic mineral

Black dolerite,

5165 NS trending dolerite

5166 055°-trending dolerite

5167 Massive charnockite

(3) 1/2 km NE of Rybnaya Bay (15/3)

Massive charnockite – several orientations of dyke. ∞

NS trending (2 sheets, 1 coarse grained)
and NE trending (~060°) (1 sheet)

2 ~140° trending dykes may be
magnesian type

5168, 9 NS trending dolerite,
5170 060° (large, coarse-gr)
5171, 2 140° trend (thin polishing)
5173 massive charnockite

20th Dec 1980 Vestfold Hills

(4) N Shore of Long Fjord, NE of Tuxedo Is (11/5)

massive orthogneiss with many
inclusions of and schlieren of
mafic (kinzite-rich) material.
Abundant dolerite dykes - several
orientations, but most are NS.

5174, 5 massive orthogneiss (charnockite)
5176 Dolerite 168° trend
5177 Dolerite 206° "
5178 Dolerite 146° "

(R12/10)

(5) Midway between Tryne's Flower crossings

Layered quartz-chamockitic gneiss, also layered paragneiss

Dolerite dykes abundant

5179 140° dolerite

5180 150° dolerite (paleomag?)

5181 180° dolerite (pos Mg-rich) paleomag C

5182 180 dolerite (pos Mg-rich) paleomag C

5183-4 grey chamockitic gneiss

5185 " "

(6) E end Luncke Ridge (R13/9)

Layered paragneiss > some chamockitic gneiss. Pegmatites & qtz veins also quite abundant

Paragneisses are garnet-rich

5186 050° dolerite

5187 340° dolerite

5188-9 Pyroxene gneiss

(7) ½mi N of Lake Verkeno (R12/7)

massive charnockite – locally foliated – some inclusions
Some more mafic, dioritic material
Numerous dolerite

5190 020° dolerite
5191 white granite (charnockite)
5192 diorite.
5193 Charnockite
5194 charnockite – ~~it~~ sheared

(8) W side Zvezda Lake (R11/13)

Layered massive grey charnockitic gneiss
Rather migmatitic – some pegmatitic layers and segregations; some mafic granulite layers

5195-6 felsic charnockitic gneiss
5197 Finer grained felsic charnockite.
5198 More mafic ~~granulite~~ charnockitic gneiss
Glacial striae – 286°

(9) ½mi S of Club Lake (R8/11)

Well layered pyroxene gneiss

Rather migmatitic, pegmatitic segregations and veins

Mostly pyroxene gneiss - felsic, coarse-grained to fairly mafic, but some garnet locally

5199 Dolerite - 170° trend
5200 Pyroxene gneiss (minor gb)
5201 Garnet pyroxene gneiss

(10) NE tip of Partizan Island (R11/5)

Massive charnockitic gneiss - some intrusive coarse-grained charnockite pegmatite, more deformed areas of str. sheared gneiss.

5202 Massive charnockitic gneiss
5203 " " "
5204 " " "
5205 Intrusive charnockite

22 Dec 1980 Laseemann Hills area

① Steinnes 91 Run 3B / V8105

Marbly ± layered gk gneiss — much white concordant quartz, much more strongly layered with biotite ± pyroxene. Pink granite (med, even grained) to E.W. smaller lakes on — main outcrop. (includes thin spindle veins)
Dip 105/75

Many minor folds
Some pegmatites
Some tropic granulite (v. weathered)
Glacial striae — 313° true

213001S

5206 Pink biotite granite RD1579
5207 Felsic garnet gneiss RD1579
5208 Garnet gneiss
5209 Dark grey biotite / pyx gneiss (± layered)

next outcrop to SW (½ way to Laseemann Hills looks v dark grey and massive (mic charnockite?)

② NE Island of Laseemann Group
91 R3B / V8096

Dip 155/~70 (variable)

Gt layered migmatitic garnet gneiss, mucl pegmatite (somewhat deformed), with kyanite and garnet (unregularly distributed.

White felsic garnet gneiss to relatively mafic gt-kyanite gneiss

Some mafic layers contain abundant pyroxene.

Gneisses are unregularly folded on a mesoscopic to minor scale.

5210,1 felsic gt-kyanite gneiss

5212 more mafic gt kyan gneiss

5213 mafic kyanite granulite layer

(3) Island W of above 9:E35/V8096

Massive, leucocratic to granitic gneiss and gt-kyan gneiss

much pink kyan-gt pegmatite

some lenses of gt-kyan-cd ± cill gneiss, interlayered with leucogneiss

Dip 350/80

5214, ~~5~~ 5 Granite gneiss (bi ± gt)
5216 Gt-bi gneiss
5216&7 Sheared gt-bi gneiss
5218 Cd-Bi-Gt gneiss
5219-20 Cd-Bi-Bi-Gt gneiss

(4) Pt 140/30 91R3B/V8096
Central outcrop of Larsemann Hills.
migmatitic gt-bi gneisses with
many pink bi/gt pegmatite
and granitic veins & beds.
Latter contain irregular layers &
schlieren of more mafic gt/bi-rich
gneiss
Some rusty weathering pelitic
layers with coarse-grained blue
cordierite, garnet, biotite, ? sill
etc. Little mafic material here

5221-2 Felsic biotite gneiss
5223 Felsic gt-bi gneiss
5224 Cd bearing metapelite

(5) Main E outcrop of Larsemann
Hills 91R3B/V8096

migmatitic gt-biotite gneiss,
mixed pegmatitic and granitic
material. ✕ melting white

biotite pegmatites
Some more mafic, gt + biot-rich
layers and lenses, biotr
generally leucocratic
Dip, highly variable, but
generally to S - many mesoscopic
folds. 160/45° at one place
Gneiss generally light in
colour, but some rusty-weathering
layers.
S225 gt-biotite gneiss
S226 gt granite

(6) SE end of Latzemann Hills
91R3E/18096 35R8/71272
Migmatitic garnet-biotite gneiss -
most is very massive
Some schlieren and bands of more
gt + biotite rich gneiss
Many pegmatitic segregations and
layers Orange mineral (X-ray) = 5406
S227 Massive gt gneiss
S228 sl foliated gt biot gneiss
S229 Layered gt biot gneiss

(7) Fuel depot

Rp 210/70

Layered tuff + basalt flows + rhyolite

5230 rhyolite

23 Dec 1980 Vestfold Hills

R10/6

(11) ½ mi SW of S tip of Lake Zvezda

Paragneiss — garnet-biotite-pyroxene gneisses, quite well layered - blue quartz, some pegmatite coarse layers and lenses

Lighter grey dolerite (?high-Mg type) has orientation of ~170°, intruded by typical dolerite (orientation ~180°)

5231.2 ?high-Mg dolerite (170°) paleomag A

5233 dolerite (180°) paleomag B

5234 biot gneiss

5235 felsic gneiss

(12) N side of Druzhby Lake R8/6

Banded grey gneiss - some gd gneiss, but mostly charnockitic and leuco-gneiss; some mafic layers (granulite)

Dolerite dykes - main trend is NS

5236-7 charnockitic gneiss

5238 leucogneiss (granite gneiss)

5239 180° dolerite

13

(13) S side of Crooked Lake R6/4

Banded gt gneiss etc (paragneiss)

Some M-rich layers, some more felsic (segregation lenses + layers)
Pelitic dykes trend ~ N-S mostly
Sillimanite occurs locally in paragneisses
Flexural strike ~310° (true)

5240 Pelitic dyke (pos Mg-rich?)
trend 200°
5241-5 Gt paragneiss

(14) NW-tip of Crooked Lake R7/17

felsic
massive & pyroxene gneiss - some more mafic pyx-rich layers. Mostly granitic gneiss - v massive, little layering

5246 210° dolerite
5247-8 massive felsic gneiss
5249 Pyroxene gneiss

(15) W side of Lake Lebed RS/15

Massive pyroxene gneiss (ortho gneiss)

Some mafic layers and schlieren (mafic granulite), X-cutting shear zones and pyroxenite lenses and layers

massive gneiss similar to last locality, but rather more homogeneous (on a large scale)

5250-1 Massive charnockitic orthogneiss

5252 Biotite-rich mafic layer

5253 Mafic granulite

(16) N side of Ellis Fjord (S. of L. Beagle) RS/10

Grey gneiss (charnockitic) — some dark leucogranite Proterozoic dykes — mostly N-S trend

5254 ~155° doleritic dyke

5255-6 Charnockitic gneiss

(17) N side of Crooked Fjord R3/8

Small kyanite gneiss (retrogressed)
in layered ultramafic gneiss
(cut by metamorphosed mafic
dykes (with garnet) - trend 170°
no chemistry intervene (cf.
Russian map)
Pyrhe, hornb, coarse - grained
margins (? pegs phase comp),
bands textural fresh granulite
(i.e. R/S)

5257-8 metamorphosed dykes
(with garnet)
5259-60 Small kyanite gneiss

(18) Brooks Hut R9/9

Massive orthogneiss (only sl
foliated), cut by dykes
dykes

5261 massive, chemically
orthogneiss

(19) W of Wedded Arm K8/16

Massive orthogneiss, cut by dolerite dykes
Some more mafic schlieren and layers
5262-3 Felsic orthogneiss
5264 175° dolerite

24th Dec 1980

(1) Søstrene Islands (main outcrop)
93R3C/L7 0170

M. layered gneisses, including gt-leucogneiss, felsic pyroxene gneiss etc

In centre of outcrop – much mafic to ~~[illegible]~~ ultramafic material (pyroxenite, mafic granulite)

Dip 175°/90° (trend 265°)

To S and N } more massive, felsic gneiss

5265 pyroxenite
5266 mafic granulite
5267 pyroxene gneiss (pyroxene)
5268-9 Garnet leucogneiss

(2) Borlugen Is - SW main island
91R3B/V8053

M layered gneisses – gt-bio gneiss, gt leucogneiss, felsic (granite gneiss), some mafic granulite, and mafic gt-rich layers. Some pegmatitic layers and segregations

Pink X-cutting pegmatite (block) are little deformed – quite

abundant, some are semi-conformable
Dip 170°/75

5270 Gt-sill gneiss
5271 Gt-biot (? sill) gneiss
5272 Gt leucogneiss

③ NW Bolingen Islands
91R3B/V8081

Gt layered, rather migmatitic gneisses

Gt Cd Si gneiss, and a range of Gt biotite gneisses. Massive Gt leucogneiss locally intrusive. Some dark grey pyroxene gneiss (restite), commonly rather foliated, with much biotite. Cross-cutting biotite pegmatites & quite abundant.

5273 Gt Cd Sill biot gneiss
5274 Gt biot gneiss
5275 Biotite ? pyroxene gneiss
Dip v. variable ~ 145° steep

(4) large island S of above
91R3B/V8081

Gt layered gneisses —
mafic garnet leucogneiss, gt-bi gneiss, etc
some pyroxene gneiss
X-cutting basitic pegmatites
Pods & lenses of mafic granulite
(1 cut by calcite vein)
Gneisses quite strongly folded
here

5276 gt leucogneiss
5277 Gt-biot gneiss
5278 mafic granulite
5279 ? pyroxene gneiss

(5) W Bolingen islands
91R3B/V8083

Rather homogeneous (? gt-3 - rich)
Sillimanite-bearing gneiss
cut by basitic pegmatites (large vein
- several metres across)
not much garnet in evidence.
Dips steep, V. variable
minor & mesoscopic folding

5280-1 Sillimanite gneiss
5282 Felsic gneiss

(6) SE island of Rolvsøya group
91R38/V8981

9 interlayered (i) garnet leucogneiss (± kyan) = rather migmatitic; cl more mafic (gt-kyan) gneiss; much ↓ even-grained ± granitic.

(ii) pelitic (sill) gneiss to quartzite - darker in colour layering not very conspicuous (massive)

Gt-kyan-sill gneiss - interlayered with qtz-rich gneiss

Dip - variable; folding on both small and large scales.

5283 Gt leucogneiss
5284 pelitic gt kyan gneiss
5285 Sill qtzite
5286 Sill gt cd gneiss

27 Dec 1980

W Larsemann Hills

(1) SW outcrop on coast (S part)
93 Run 3C/V8179

S part is massive, but layered; mostly felsic, charnockitic gneiss (brok + ?pyx), some mafic granulite layers (conformable)
Rep 180°/80 minor tight folds.
X-cutting pink brittle pegmatites

5287 mafic granulite
5288 pyroxene gneiss
5289 felsic gneiss

(2) N part of same outcrop
93,3C/V8179

Layered felsic garnet gneiss relatively migmatitic. Some pods and layers of massive gneiss.
Gt gneiss ranges from gt foliated (+ abundant brokite) to massive and granitic (little garnet)
Rare pods of black pyroxenite
Rep 165/80

5290 Gt brokite gneiss
5291 massive gt gneiss
5292 felsic pod in gt gneiss

5293 pyroxenite

(3) Outcrop between above and W Lazenamm
93 Run 3C /V 8184
Tp 170/70
Migmatitic garnet gneiss intruded by foliated garnet granite (mod to pink and coarse-grained — pegmatitic)
Pods and lenses of more mafic garnet-biotite gneiss (with sillimanite); minor mafic pyroxene gneiss Centre of outcrop is more layered gneiss with X-cutting coarse-grained, deformed pink pegmatite veins
Intrusive relations clear, but granite is quite strongly foliated
5295-6 gt-biotite granitic gneiss
5294 Foliated gt-biot granite
5297 gt biot-sill gneiss

④ W Larsemann Hills 93 R3C/V8184

Migmatitic gt-biot gneiss + gt-biot granite (foliated commonly) - like last outcrop.
Gneissic granite has pegmatitic layers and segregations. Schlieren of more mafic biot-gt gneiss have feldspar megacrysts locally.
Dip highly variable - contorted, minor, irregular folds.

5298 (2 spec). Gt biot granite
5299 Gt biot granite
5300 Gneiss gneiss (gt-biot)
5301 bi-gt gneiss (inclusion)

⑤ W. Larsemann Hills - main outcrop
91 R3B/V8091

Massive gt-biot granite (foliated) overlain by banded paragneiss - gt-biot ± cord. -
Dip 150°/40°
Latter are intruded by granite and pegmatitic veins.

5302 Massive gt biot granite gneiss
5303 massive gt gneiss (granite) with ? cordierite

5304 Bi-Cord gneiss

⑥ Island N central Lassemanns

91 R3B/ V8094

Generally similar to last locality — but mostly
Gt-biot gneiss intruded by minor
garnet granite (part foliated)
and biotite pegmatite (several
metres thick)

Dip 150/70

5305 massive garnet gneiss (? granite)

5306 Gt-biot gneiss

⑦ S end of W Lassemanns Hills

93 Rem 3C/ V8184

Dip 166/60°

Massive migmatitic gt-biot gneiss
with pegmatitic layers and segregations
containing v large (~ cms) gt > cord
xls Some layers are quite
quartz-rich. Rare orange
mineral in aggregates up to 5 cm
across (22 [redacted]) — ? zircon

5307 Bust-gt ± sill gneiss
5308 massive bust-gt gneiss
5309 gt-bust-Cord gneiss

16 × 283°
273

16.00 ~ 0°C
16.06 ~ 10°C

·16

29 Dec 1980

Vestfold Hills

(20) N. Tryone Islands no photo

Massive characteristic orthogneiss with numerous mafic schlieren and layers (almost agmatitic locally). Some pink, conformable pegmatites.

Dolerite dykes – NS and 135°

5310 – 1 Orthogneiss

5312 135° dolerite

(21) S. Wyatt Earp Is. no photo

Like last locality – dolerite dykes cut pink rich pegmatite (and granite) veins cutting gneiss

Veins trend ~195°

5313 Orthogneiss

Walkabout rocks look much the same – orthogneiss – numerous pink pegmatites

(22) S. side of lake Grace R15/6

Mostly massive orthogneiss, although more strongly foliated than last locality

Numerous dolerite dykes

Some of the orthogneiss is quite mafic (? diorite), and felsic gneiss has inclusions of this.

Pink pegmatite (pre-dyke) and pegmatitic segregations common — less foliated gneiss has appearance of a net-veined complex locally

5314 Massive orthogneiss
5315 more mafic orthogneiss
5316 Grey (alt?) orthogneiss

Some grey areas of gneiss may be altered (pyx → bt ?)

(23) Latemula Lake R2/2

St Layered paragneiss — gt-bearing, cut by metamorphosed dolerite dykes (orientation

~ 175°)

Latter contains gt in fairly regular aggregates ~ 1 cm across, but not in all parts of each dyke.

5317-8 Gt-biot gneiss
5319 Gt-bearing metadolerite (175°)
5320 metadolerite (175°)

(24) Zolotoy Island R1/4

Mainly garnet gneisses - well layered with some characteristic ?pyroxene gneiss

Dykes are metamorphosed, many contain particles of garnet

5321 Garnetiferous dolerite ~ 180°
5322 " " 150°
5323 Dolerite (m/m) ~ 180°
5324 Garnet gneiss

(25) Harker Island R2A/5

Partly charnockitic gneiss — rather migmatitic + some garnet gneiss. Pegmatite quite abundant (some possibly granite dyke) garnet locally developed in dykes and charnockitic gneiss (Ratcliffe)

5325 Felsic gneiss
5326 Charnockitic gneiss with garnet
5327 Metamorphosed dyke

5326 looks like high Mg tholeiite in T/S

30 Dec 1980

Svenner Islands 75 Rum 321/7108L

(1) SW main island

Gt layered garnet gneiss, including Gt-sill-cord gneiss

V. little mafic granulite or pyroxene gneiss evident.

Most gneiss is fairly leucocratic, but some more gt+kspar rich layers.

Dip 120° / 85°

5328-9 Garnet gneiss

(2) Layered garnet gneiss + gt granite dyke — orientation 135°

5330 Garnet gneiss

(3) Small island ~ 3km NE of above

layered gt sill cord kspr gneiss with marginal garnet - granite
Gneiss layers Bdg 120°/60°
Graphite in pegmatites (+ garnet)
5331 Garnet granite
5332 Gt Cd Sill Rust gneiss

(4) Flat-topped island SW end of main group

Various cordierite-rich and garnet gneisses; some mafic granulite
Bdg rather variable - much folding
Some layers contain ~ 20-50% cordierite

5333 Cd gneiss
5334 Mafic granulite

(5) Large Island about 2 km E of above

layered, steeply dipping gneiss

much Cd-rich gneiss -
quite st layered > foliated,
some coarser grained pegmatitic
segregations. Garnet mod..
abundant in some layers -
others gt free
24 125/90

5335-6 Cd-rich gneiss
5337 gt-Cd gneiss

(6a) E end of Filla Is.
75 em 720 / 7065L

V. contorted migmatitic gneisses
much quite mafic mtl. felsic
veins (some pegmatitic) - also larger
masses of granite (gt ± tourmaline)
Some gt-rich gneiss, gt-biot gneiss
and mas. mafic granulite.
Any metasedimentites are not apparent
(but could be too deformed to be
recognizable).
5338 St granite (massive)
5339 Biotite rich gneiss.

31st Dec 1980

Svenner Islands 75R321 / 7108L

(6) Main island at NE end of group

Rather massive gt leucogranite — quite migmatitic, pegmatitic and granitic layers; gt quartzite

Dip 100/85°

5340 gt gneiss (reddish)
5341 massive gt leucogneiss (grey)

(7) Island ~ 5km SW of above

St layered, steeply dipping gneiss much cordierite, similar to last locality in Svenners yesterday
some massive leucogranite, mafic gneiss and garnetiferous gneiss

5342 Cord gneiss
5343 pelitic gneiss

(2) N Island at SW end of Braithstand Bluffs 91R3B/V8116

Layered garnet gneiss - mixed white leucogneiss and more mafic gt + biotite gneiss (large gts up to several cms)
Conformable granite gneiss layers - pink, quite strongly foliated, but partly porphyroblastic

Dip 120/30° (rather variable)

5344 Granite gneiss
5345 Granite gneiss (minor gt)
5346 Garnet leucogneiss

(3) 2nd island (nearer Braithstand Bluffs) 91R3R/V8116

mostly foliated porphyroblastic granite (similar to Amanda Porphyry) Some conformable gt bearing gneiss layers Dip 170/30°

Some st in granite gneiss

5347 Porphyroblastic gt + kyst granite

④ Braidstrand Bluffs – E end of western bluffs 91R3B/V8116

Semet gneiss – granite ± layered Some st lens gneiss, migmatitic with gt + kyst rich layers, lenses and schlieren.

Some layers contain sill ± / or cord

Dip ~ 185/25° kyst rather variable — contorted granite veins etc in minor folds

5348 Semet gneiss (with sillimanite)
5349 More mafic gt-kyst gneiss

⑤ Bluffs about 2 mi E of above 91R3B/V8116

St layered sandy gneiss + some porphyroblastic gt + kyst granite gneiss

Cut by gt + bt bearing dyke (trend 235°) - with feldspar porphyroblasts; quite felsic in composition, but not granitic:

Dip 210/30

5350 gt + bt bearing dyke
5351 Porphyroblastic gt granite gneiss
5352 Str. layered gt-bt gneiss

(6) W part of E Braithwaite Bluffs
91 R3B/V8119

Layered garnet gneiss with white X-cutting gt leucogranite veins Dip of gneiss 150/20
All cut by white to pink gt bi pegmatite veins

5353 White gt leucogranite
5354 gt gneiss (with graphite)

(7) E of East Snowy of Brattstrand Bluff 91R3B / V8122

layered garnet gneiss, like last locality

Dip 215 / 20

Much gt leucogneiss (some with sillimanite), minor more mafic gt gneiss, and some layered gneiss

5355 gt leucogneiss
5356 gt-sill gneiss

magnetite float with copper mineral staining (green); also radiating x-ls in magnetite-rock (sillimanite)

Cu mineral is atacamite
$[Cu_2(OH)_3Cl]$

3rd Jan 1981 Vestfold Hills

(26) Outcrop on N side of Sorsdal Glacier, 3 km E of Lake Terrasovoye R3/10

Paragneiss — gt-rich garnet bearing pelitic migmatite and mafic dykes — trend 175°

Latter contain abundant garnet

5357 gt bearing metadolerite

(27) Island W of Pedersen Island R3/2

Paragneiss + many dolerite dykes — mostly ~N–S orientation.

5358 black dolerite (looks quite fresh) — orientation 200°

5359 lighter grey dolerite (poss m/m, but no garnet visible — 180°

(28) E side of Harder Island R2A/5

Mostly garnet-rich paragneiss + large body of pyroxenite (2 pyx + biotite). Doleritic dykes are n/m, garnet commonly developed in patches

5360 Black doleritic (lath grain) 180°
5361 Lighter grey metadoleritic 185°
5362 " " +gt 185°

Dykes are cut by biotite pegmatite

(29) Island E of Pinkado Island R1/5

Garnet-rich paragneiss – st. layered cut by metamorphosed doleritic dykes (patchy garnet development)
Grasses quite migmatitic – leucosome also some biotite pegmatites (~30-50 cm thick

5363-4 gt gneiss
5365-6 metadoleritic (~ 160° trend)

(30) Kazak Island R1/3

Garnet paragneiss - rather migmatitic with pegmatitic segregations and layers
2 metamorphosed dykes
5367 — 150° trend (larger)
cut by
5368 100° trend (darker colour)
Some X-cutting pegmatites

(31) Headland S side of Henderson Bay

5369 Dolerite — trend ~ N-S

10 Jan 1981

Scullfold Hills area — no photos

(32) N group of "PA" islands — S island of pair (? McCallie Rocks)

Dark coloured mafic granulite — V coy massive — some pegmatitic segregations and larger (< 30 cm) X-cutting pegmatites (with silver-black mineral — ? magnetite — spec from XRD)

Mafic granulite has some green inclusions, and is isolated near contact with grey felsic gneiss

5370 Mafic granulite (proto ? anthrum).

No dykes here

(33) S group of "PA" islands — S island of pair (Murphy Rocks ?) — no photo

Similar rather mafic Charnockite — locally rather aplitic (pegmatitic veins and segregations

Cut by X-cutting pink to grey pegmatites, and grey basalt

granite dyke – trend 195°

5371 Mafic charnockite

5372 granite dyke (~ 20 cm across)

(34) N Wyatt Earp Island no photo

(highest outcrop)

Massive dark charnockite, cut by

dolerite dykes

5373 Massive charnockite

18 Jan 1981

Verlyld Hills

Loc 3A 1/2 mls NE of Rybinaya Bay

5374 Pos magnesian dolerite (coarse grained; Lscat 150°
cut by N-S trending dolerites (G1,2)
(kalsomag samples F1, 2)

21 Jan 1981

83/R318, 9087R

(1) Landing Bluffs
Porphyritic granite
large pink K-feldspar, biotite, qtz
some white fine grained, aplitic
biotite granite veins

5375, 6 Porphyritic granite
5377 Fine grained white
biotite granite

(2) Larsom Island 83/R318, 9083R
Similar to last outcrop
5378 Porphyritic granite

(3) Bozun Island 83R318/9080V
Porphyritic granite
some white aplite veins + more
mafic xenoliths
large pink fld phenocrysts
5379-80 Porphyritic granite

(4) N outcrop of E side of Sandefjord Bay 83/318/8019R

Some porphyritic granite
J381

(5) Strone Peak 83/318/8095V

Banded garnet-gneiss, some mafic granulite
~~Strike~~ Dip 350/80

Quite well foliated, some garnet gneiss is mod. st deformed
Some coarse-grained leucocratic granites J382-3 garnet gneiss
J384 mafic gneiss

(6) Coastal outcrop 8km 83/318/8095V
NW of Carolere Mikkelsen

Similar to last locality, as are intermediate coastal outcrops

Garnet gneiss, some quite leucocratic minor granulite layers.
Dip 355/85

J385-6 Garnet gneiss

91R 38/8060V

(7) Leaved outcrop 5 km ENE of Caroline Mikkelsen

Layered gneiss, similar to last locality and to outcrops in between

Dip 010/80

Garnet gneiss, garnet leucogneiss, minor mafic granulite and more mafic pt/hbl gneiss

5387-8 Garnet gneiss

(8) Svarthamaren Nunatak 83/318/9106R

Massive charnockitic gneiss - brown weathering

Somewhat layered, but not strongly

Some garnet-bearing layers and minor granitic

5389 Charnockitic gneiss

5390 More mafic gneiss

5391 Charnockitic gneiss

Dip 000/vertical

(9) Mt Caroline Mikkelsen
91R35/ 8060V

Massive charnockite grain,
like last locality

dip 000/80°

J392-3. Massive charnockite
grain

(10) Boyd Nelk 83R318/9109R

Massive charnockite grain
Similar to last locality -
some garnet locality, some
leucogneiss, below Pt3, Pegmatitic
migmatite vein

J394 Leucogneiss
J395 Charnockite gneiss
J396 " " - more mafic

Dk 190/85

(11) Mt Knatten [illegible] 93K/6 / 0111V

Porphyritic granite very similar to Landy Bluff type — large (up to 7cm) feldspar phenocrysts, biotite

5397 Porphyritic granite
Cut by white aplite veins

(12) Mt Knattens rocks 93K3E / V8146

Similar porphyritic biotite granite intruded by biotite gneiss (xenoliths) Most of contact with granite. to ½ more gneiss

5398,9 Porphyritic granite
5400 Biotite gneiss

(13) Rudd Island small outcrop at N side 93R3C/R9161

Garnet gneiss — rather migmatitic and has aplite veins (rare)
Gneiss dip to ≈ 155/70, but is rather variable, sometimes contorted
Much gt leucogneiss is massive and poorly layered, but has quite a strong foliation (qtz lenticles, elongated biotite aggregates, etc)
Diffuse mafic layers + schlieren are cut across by this foliation
5401 garnet leucogneiss
5402 Gt-bearing gneiss

(14) Stem Island 93R3C/R9168

Layered garnet gneiss — much leucogneiss, gt-bearing gneiss and v. massive pink intrusive (gt-bearing augen gneiss). Mafic rich to 5 m wide.

5403 Gt augen gneiss (intrusive)
5404 Gt gneiss
5405 Gt leucogneiss

Dip 160/60°

XRD specimens

5406 Orange mineral in garnet gneiss from SE Lazeman Hills (apatite)

5407 Black mineral from pegmatite (ilmenite)

5408 Greenish mineral from felsic St Gneiss (feldspar)

5409 ? Cu mineral in magnetite-rich rock, + (sellimanite) radiating mineral [uraconite]

5410 Black mineral - poss magnetite (not the dark feldspar) (magnetite)

5411 Blue quartz

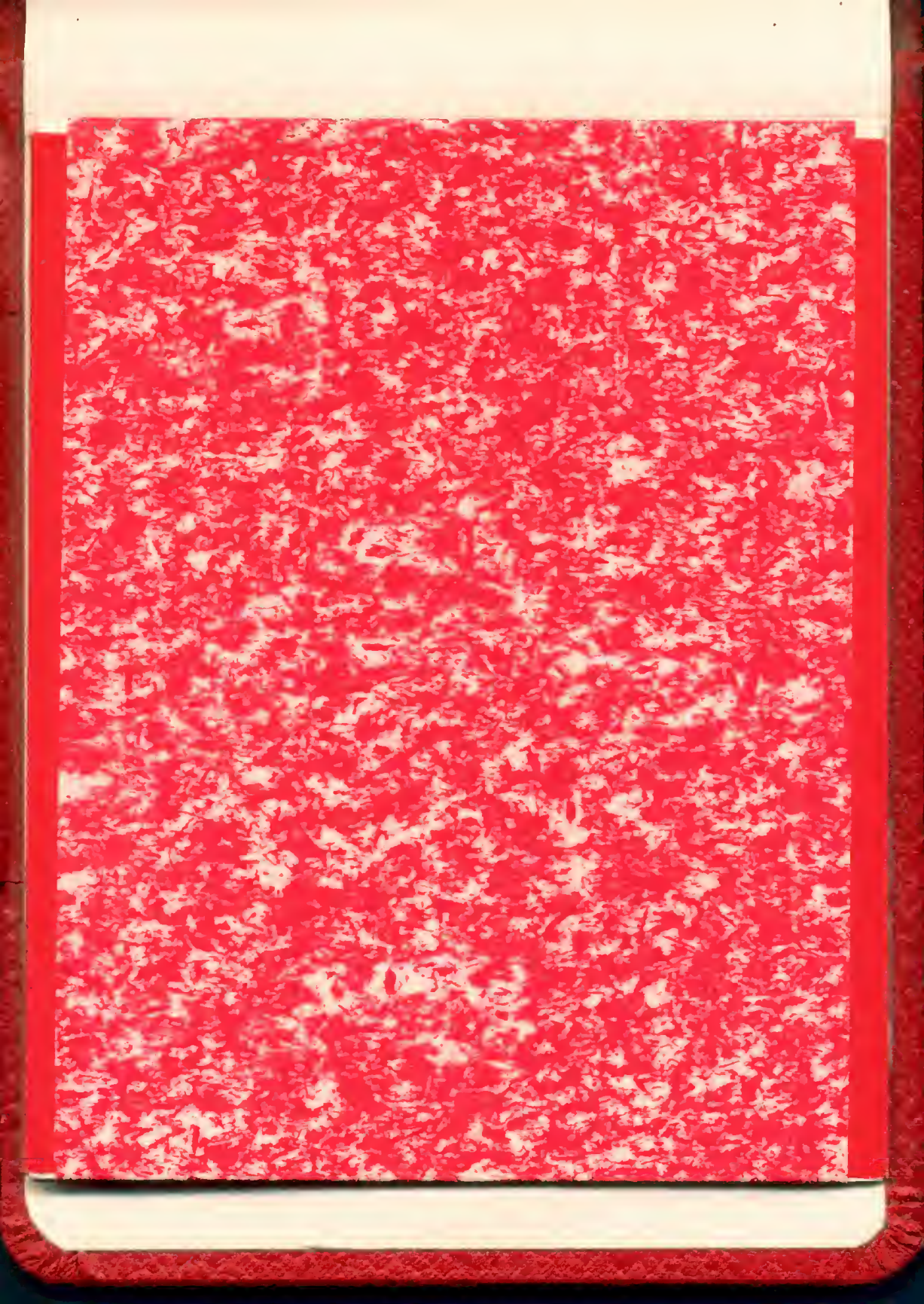
5412 Garnet from Rauer Is

25 Rock Drums

QA/D/33-43 11 Scrapbks

QA/D/44-57 14 Scrapbks

18 CTZI
5 Kodachrome 25
1 ektachrome

Flying Hours

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16 Dec		3.37
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23		2.12
24		3.20
26		0.10
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29		1.58
30		1.55
31		2 17
Jan 3		1.45
5		0.22
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9		2.19
10		1.25
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